

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/08639

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ G02B6/12, G02B6/00, G02B6/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ G02B6/12, G02B6/00, G02B6/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Jitsuyo Shinan Toroku Koho	1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
JOIS (JSTPLUS)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Shigeo KITAKA et al., "ID Photonic Kessho ni yoru Hacho Bunsan", Dai 49 Kai Oyo Butsurigaku Kankei Rengo Koenkai Koen Yokoshu, 2002 March, No.3, page 1035 (28p-ZF-14)	1, 2, 6-8, 12-19
Y	EP 1184708 A2 (NIPPON SHEET GLASS CO., LTD.), 06 March, 2002 (06.03.02), Full text; all drawings & JP 2002-236206 A & US 2002/27655 A1	1, 7, 8, 12-19
Y	EP 1211531 A2 (NIPPON SHEET GLASS CO., LTD.), 05 June, 2002 (05.06.02), Full text; all drawings & JP 2002-169022 A	1, 7, 8, 12-19

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
29 October, 2003 (29.10.03)Date of mailing of the international search report
11 November, 2003 (11.11.03)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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INTERNATIONAL SEARCH REPORT

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Masayuki SHIRANE, Hirohito YAMADA, "Photonik Kessho ni okeru Hikari Tokaritsu no Tanmen Iso Izonsei", Dai 49 Kai Oyo Butsurigaku Kankei Rengo Koenkai Koen Yokoshu, 2002 March, No.3, page 1036 (28p-ZF-16)	1, 2, 6-8, 12-19
Y	Daisuke OZAKI, Tomoo KOMEHANA, Toshihiko BABA, "2jigen Photonic Kessho no Muhanshaka ni Taisuru ichikosatsu", Dai 47 Kai Oyo Butsurigaku Kankei Rengo Koenkai Koen Yokoshu, 2000 March, No.3, page 1056 (28p-P5-3)	1, 2, 12-19
Y	EP 1184690 A2 (FUJI PHOTO FILM CO., LTD.), 06 March, 2002 (06.03.02), Full text; all drawings; particularly, Fig. 5 & JP 2002-71981 A & US 2002/41425 A1	1, 2, 12-19
Y	WO 99/64904 A1 (BROENG, Jes; BARKOU, Stig, Eigil; BJARKLEV, Andres, Overgaard), 16 December, 1999 (16.12.99), Full text; all drawings; particularly, Fig. 6 & JP 2002-517794 A	12-19
Y	KERBAGE, C. et al., Air-silica microstructure fiber based variable optical attenuator device. In: Optical Fiber Communication Conference and Exhibit 2002(OFC 2002) Technical Digest, March, 2002, pages 468 to 469 (ThK4)	13
Y	WO 00/06506 A1 (CORNING INC.), 10 February, 2000 (10.02.00), Full text; all drawings; particularly, Claim 4 & JP 2002-521306 A & US 6260388 B1 & CN 1311763 T	18
Y	US 5802236 A (LUCENT TECHNOLOGIES INC.), 01 September, 1998 (01.09.98), Full text; all drawings; particularly, Fig. 4 & JP 10-95628 A & EP 810453 A1 & DE 69707201 E	19
E,X	US 2003/142385 A1 (Shigeo KITAKA, Kazuaki OYA, Masatoshi NARA), 31 July, 2003 (31.07.03), Full text; all drawings & JP 2003-215362 A	1-11
E,X	JP 2003-287633 A (NIPPON SHEET GLASS CO., LTD.), 10 October, 2003 (10.10.03), Full text; all drawings (Family: none)	1-11